

Appln. No. Serial No. 10/806,587
Amdt. Dated 4/15/05
First Response in Appln, Reply to Office Action of 12/15/2004
Page 2 of 7

AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A cooling system for a fuel cell system comprising:
a circulation system including a circulation pump for circulating coolant, the coolant essentially consisting essentially of water and glycol;
a fuel cell connected to the circulation system so as to be cooled by the coolant;
a heat exchanger connected to the circulation system so as to radiate heat from the coolant; and
a filter connected to the circulation system and configured to remove oxidation reaction product of the glycol from the coolant, the filter comprising ruthenium supported on activated carbon.
2. (Cancelled).
3. (Cancelled).
4. (Currently amended) The cooling system of claim 1, wherein:
the filter comprises a pair of connection ports communicating with the circulation system, a tubular main body, a pair of mesh members made of stainless steel, the mesh members being respectively disposed at the both ends and the inside of the tubular main body, ~~and activated carbon particles each supporting ruthenium.~~

Appln. No. Serial No. 10/806,587

Amtd. Dated 4/15/05

First Response in Appln, Reply to Office Action of 12/15/2004

Page 3 of 7

5. (Original) The cooling system of claim 1, wherein:

the filter is disposed upstream of the circulation pump.

6. (Currently amended) A cooling system for a fuel cell system comprising:

a circulation system including a circulation pump for circulating coolant, the coolant essentially consisting essentially of water and glycol;

a fuel cell connected to the circulation system so as to be cooled by the coolant;

a heat exchanger connected to the circulation system so as to radiate heat from the coolant; and

a an inert-gas injector connected to the circulation system and configured to inject inert-gas into the circulation system so as to purge the an oxidation reaction product of the glycol from the coolant.

7. (Currently amended) The cooling system of claim 6, wherein:

the inert-gas essentially consists essentially of nitrogen.

8. (Original) The cooling system of claim 6, wherein:

the gas injector is disposed upstream of the circulation pump.

9. (Currently amended) A cooling method for a fuel cell system comprising the steps of:

circulating coolant essentially consisting essentially of water and glycol through a fuel cell, a heat exchanger and degradation prevention means a filter, wherein the filter comprises ruthenium supported on activated carbon; and

removing oxidation reaction product of the glycol from the coolant by the degradation prevention means the filter.

Appln. No. Serial No. 10/806,587
Amdt. Dated 4/15/05
First Response in Appln, Reply to Office Action of 12/15/2004
Page 4 of 7

10. (Original) The cooling method of claim 9, wherein:
the removing step comprises filtering the oxidation reaction product.

11. (Cancelled).

12. (New) A cooling method for a fuel cell system comprising the steps of:
circulating coolant consisting essentially of water and glycol through a fuel cell, a
heat exchanger and a gas injector; and
injecting inert-gas into the coolant by means of the gas injector so as to purge the
oxidation reaction product from the coolant.

13. (New) The cooling system of Claim 6, further comprising a gas tank containing the
inert gas, the gas tank directly connected to the inert-gas injector.